

In the claims.

The claims below are amended to read as follows.

1. (Amended) A method for conserving power in a positioning system receiver used in connection with a positioning system providing ranging signals, the receiver using the ranging signals to determine a state of motion of the receiver, the method comprising:

a) a step (32) of performing at least a predetermined number of solutions of the state of motion of the receiver using a filter solution based on a mix of models of the motion of the receiver, a mix that is varied from one solution to the next according to a predetermined criteria, and of providing the model mix used in each solution; and

b) a step (35) of adopting a partial duty cycle indicating a percentage of time selected receiver components are powered off, the percentage of time based on the mix of models used in successive solutions;

wherein the step (32) of performing at least a predetermined number of solutions of the state of motion of the receiver is performed at least once during a time in the partial duty cycle when the selected receiver components are powered off.

4. (Amended) An apparatus for conserving power in a positioning system receiver used in connection with a positioning system providing ranging signals, the receiver using the ranging signals to determine a state of motion of the receiver, the apparatus comprising:

a) means (15) for performing at least a predetermined number of solutions of the state of motion of the receiver using

a filter solution based on a mix of models of the motion of the receiver that are varied from one solution to the next according to a predetermined criteria, and for providing the model mix used in each solution; and

b) means (18) for determining a partial duty cycle indicating a percentage of time selected receiver components are powered off, the percentage of time based on the mix of models used in successive solutions;

wherein the means (32) for performing at least a predetermined number of solutions of the state of motion of the receiver is operative during a time in the partial duty cycle when the selected receiver components are powered off.

7. (Amended) A system, including: a transmitter for transmitting a ranging signal, and a ranging receiver for receiving the ranging signal and for determining a state of motion of the ranging receiver, the ranging receiver characterized in that it includes an apparatus for conserving power that in turn comprises:

a) means (15) for performing at least a predetermined number of solutions of the state of motion of the ranging receiver using a filter solution based on a mix of models of the motion of the ranging receiver that are varied from one solution to the next according to a predetermined criteria, and for providing the model mix used in each solution; and

b) means (18) for determining a partial duty cycle indicating a percentage of time selected ranging receiver components are powered off, the percentage of time based on the mix of models used in successive solutions;

wherein the means (32) for performing at least a predetermined number of solutions of the state of motion of the receiver is

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operative during a time in the partial duty cycle when the selected receiver components are powered off.
